

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 July 2003 (17.07.2003)

PCT

(10) International Publication Number
WO 03/057457 A1

(51) International Patent Classification⁷: **B29C 70/86**,
70/52, F03D 1/06

(21) International Application Number: PCT/DK03/00013

(22) International Filing Date: 10 January 2003 (10.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: **11 July 04**
EP 02388002.4 11 January 2002 (11.01.2002) EP

(71) Applicant (for all designated States except US): **LM GLASFIBER A/S** [DK/DK]; 1, Rolles Møllevej, DK-6640 Lunderskov (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KILDEGAARD, Casper** [DK/DK]; 54 b, Kikkenborgvej, DK-6000 Kolding (DK).

(74) Agent: **CHAS. HUDE A/S**; 33, H.C. Andersens Boulevard, DK-1780 Copenhagen V (DK).

(81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

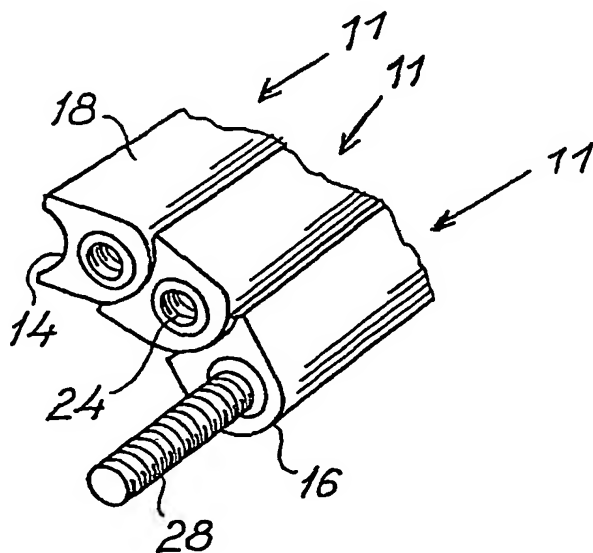
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: AN EMBEDDING ELEMENT TO BE EMBEDDED IN THE END PART OF A WINDMILL BLADE, A METHOD OF PRODUCING SUCH AN EMBEDDING ELEMENT AS WELL AS EMBEDDING OF SUCH EMBEDDING ELEMENTS IN A WINDMILL BLADE



(57) Abstract: An embedding element (11) for embedment in the root of a wind turbine rotor blade (15) of a fibre composite material, said embedding element being elongated and having a first end portion (1) and a second end portion (2) and provided with fastening means, eg a threaded hole, a threaded rod or the like in its first end portion (1). Between its two end portions (1,2) the embedding element (11) is provided with a first longitudinal lateral face (14) extending substantially concavely in a cross-sectional view perpendicular to the longitudinal axis of the embedding element, and with a second longitudinal lateral face (16) facing opposite the first lateral face (14) and extending substantially correspondingly convexly in a cross-sectional view perpendicular to the longitudinal axis. The invention further relates to a method of producing such an embedding element, a method of producing a wind turbine blade (15) of fibre composite material, a plurality of embedding elements (11) being embedding elements (11) being embedded such in juxtaposition in the blade root that they follow the circumference of the root and the concave lateral face (14) of each embedding element (11) engaging the convex lateral face (16) of a juxtaposed embedding element and allowing access to the fastening means (24) from the outside.

WO 03/057457 A1